We Claim:

1. A method for identifying a nucleic acid with an electronic stringency device, comprising the steps of:

forming a double-stranded hybridization product comprising a sample nucleic acid and a probe of known sequence, wherein the sequences of the sample nucleic acid and probe either are the same or differ by one nucleotide, an environmentally sensitive emissive fluorescent label being associated with the hybridization product in proximity to the nucleic acid to be identified, wherein either the sample nucleic acid or the probe is attached the electronic stringency device,

subjecting the double-stranded hybridization product to a varying electrophoretic force,

monitoring the fluorescence from the double-stranded hybridization product while varying the electrophoretic force over time, and

analyzing the fluorescent signal to identify the nucleic acid of the sample.

2. The method of claim 1, wherein the environmentally sensitive emissive label is selected from the group consisting of environmentally sensitive dyes, fluorophores and chromophores.

3. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to hydrophilicity.

4. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to hydrophobicity.

5. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to pH.

6. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to electrostatic charge.

7. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to Van der Waals interactions.

8. The method of claim 1, wherein the environmentally sensitive emissive dye is sensitive to DNA sequence variability.

9. A method for analyzing a nucleic acid sequence, utilizing an electronic stringency control device, comprising the steps of:

providing the nucleic acid sequence, a probe of known sequence, and a label in proximity to the nucleic acid to be identified on the electronic stringency control device to form a labeled double-stranded hybridization product, the nucleic acid sequence having a net charge of a first sign, the label having a net charge of a sign opposite to the first sign,

subjecting the double-stranded hybridization product to an electrophoretic force,

monitoring the emission from the double-stranded hybridization product while varying the electrophoretic force over time, and

analyzing the emission to determine the sequence of the sample nucleic acid.

10. The method of claim 1, wherein the varying electrophoretic force is a pulsed sequence.